

REFRIGERANT SYSTEMS

ACTIVITY RAMS — ADAPT TO SITE BEFORE USE

COMPETENCE-GATED: F-Gas certificated engineers · split and VRF systems

KD-RAMS-ME-008 Rev A0

Statutory basis: HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5 (this document is the recorded safe system of work); PUWER 1998; Manual Handling Operations Regulations 1992; Work at Height Regulations 2005; COSHH 2002; CDM 2015 regs 13 and 15. Activity-specific law is cited on the documents it applies to: Gas Safety (Installation and Use) Regulations 1998, the Fluorinated Greenhouse Gases Regulations 2015 for refrigerant handling, and ACOP L8 (4th edition, 2013) for water systems.

1 DOCUMENT AND PROJECT IDENTIFICATION

RAMS REFERENCE	PROJECT / SITE REF	SITE NAME AND ADDRESS	DATE PREPARED	NEXT REVIEW DATE
CLIENT / PRINCIPAL CONTRACTOR	PLANNED START	DURATION	OPERATIVES	SUPERVISING THE WORK

2 SCOPE OF WORKS

Installation of refrigerant pipework and systems — splits and VRF — by F-Gas certificated engineers: pipework, pressure testing with nitrogen, evacuation, charging and leak testing.

This document does not cover: ANY refrigerant handling by persons without F-Gas certification; ammonia and CO2 systems unless the certification and this assessment specifically cover them.

SITE-SPECIFIC SCOPE, LOCATIONS AND LIMITATIONS

3 RISK ASSESSMENT — SCORE EACH RISK FOR THIS SITE, THEN ADD WHAT IS MISSING

The hazards and controls below are the starting point for this activity, written by a working main contractor. They are not complete for your site until a competent person has scored each risk, added the site-specific hazards, and struck out anything that does not apply. Rate risks High / Medium / Low before and after controls.

1. Manual handling of pipe, ductwork, plant and sanitaryware

At risk: Operatives

Controls: Mechanical aids first — pipe trolleys, duct lifters, stair-climbers, genies for plant; two-person lifts as the default for lengths and units; order in manageable sections; protect the route.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

2. Work at height from steps, podiums, towers or MEWPs

At risk: Operatives, and anyone below

Controls: Select access by the Work at Height hierarchy — podium or tower before steps; MEWPs by trained (IPAF) operators only. Inspect access equipment before use, establish an exclusion below overhead work, and secure tools and materials against dropping.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

3. Slips, trips and housekeeping

At risk: Everyone in the work area

Controls: Keep the workface clear, remove waste and offcuts as they are created, route leads at high level or under mats, and maintain task lighting.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

4. Refrigerant release — asphyxiation and cold burns

At risk: Operatives, occupants

Controls: F-Gas certificated engineers only; recover — never vent; charge to the nameplate mass; leak test before charging; refrigerant monitors in plant rooms where the charge and room size require them; gloves and eye protection when connecting.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

5. Nitrogen pressure testing — stored energy

At risk: Operatives

Controls: Nitrogen with a regulator and relief only; test to the manufacturer's pressures; never use oxygen or refrigerant to pressure test; exclusion during pressurisation.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

6. Brazing on refrigerant lines

At risk: Operatives, the building

Controls: Hot works controls apply; braze with nitrogen purge flowing; fire watch per the certificate.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

Site-specific hazards not listed above — every site has at least one:

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HAZARD	WHO IS AT RISK	CONTROLS	INITIAL HI...	RESIDUAL...	ACTION OWNER	BY WHEN

4 METHOD — SEQUENCE OF WORK

- 01 Verify F-Gas certification for every engineer — recorded on page one.
- 02 Install pipework to the manufacturer's limits (lengths, lifts, oil traps); support and insulate as specified.
- 03 Pressure test with regulated nitrogen to the manufacturer's figures; record.
- 04 Evacuate to the specified vacuum and hold; record.
- 05 Charge to the nameplate; weigh and record; leak test joints.
- 06 Complete the F-Gas records and labels; commission per the manufacturer.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

5 PLANT, EQUIPMENT AND MATERIALS

Nitrogen with regulator and relief

Vacuum pump and gauges

Recovery unit and scales

Brazing kit (hot works)

INSPECTION / THOROUGH EXAMINATION REFS

COSHH ASSESSMENT REFS

6 PPE — THE LAST LINE OF CONTROL, NOT THE FIRST

Head protection

Safety footwear

High visibility

Gloves — task-rated

Eye protection

Hearing protection

Cold-burn gloves and eye protection for refrigerant work

RPE TYPE, FACE-FIT STATUS, AND ANY OTHER PPE REQUIRED

7 PERMITS REQUIRED BEFORE THIS WORK STARTS

A permit authorises this work in that place, on that day. It extends the safe system of work in this document — it does not replace it (HSE HSG250). The site issues the permit; record its number before work starts.

KD-PTW-HW-001 — Hot Works Permit

For brazing on refrigerant lines.

PERMIT NUMBER

KD-PTW-FW-002 — Fire Watch Certificate

Completes every hot works permit.

PERMIT NUMBER

8 EMERGENCY ARRANGEMENTS — COMPLETE FOR THIS SITE

FIRST AIDER AND LOCATION

NEAREST A&E

ASSEMBLY POINT

HOW THE ALARM IS RAISED

EMERGENCY ACCESS FOR THIS WORK AREA

SPILL / ENVIRONMENTAL RESPONSE

9 BRIEFING RECORD — EVERYONE WORKING UNDER THIS RAMS SIGNS BEFORE STARTING

By signing you confirm the contents of this RAMS have been explained to you, you understand the hazards and controls, and you will work to the sequence stated. Tell the supervisor if the work or the site does not match this document — work stops until it does.

NAME	COMPANY	SIGNATURE	DATE

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10 PREPARED AND ACCEPTED

Prepared / adapted for this site by — I confirm I have adapted this document to the site, scored the risks, and that it describes how the work will actually be done.

PRINTED NAME	ROLE / COMPETENCE	COMPANY	SIGNATURE	DATE	TIME

Accepted for the site by — principal contractor or site manager review.

PRINTED NAME	ROLE	COMPANY	SIGNATURE	DATE	TIME

Review this RAMS if the work, the site or the law changes, and at least before each new phase of the works. Flatten the completed PDF before filing so the record cannot be silently edited.

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

Rev	Date	Class	What changed	Authorised by
D0	2026-08-09	first-issue	First issue.	— not yet approved —
D1	2026-08-10	material	Refrigerant law cited properly as the Fluorinated Greenhouse Gases Regulations 2015 in place of "the F-Gas Regulation"; ACOP L8 dated to the 4th edition, 2013; COSHH 2002 added to the legal basis. Legislation position reviewed against Product Legislation Register KD-REG-01 Rev R01.3 and the August 2026 horizon scan; cutoff moved to 10 August 2026.	— not yet approved —
A0	2026-08-27	review	Approved for issue by the author. Content unchanged from D1; the draft status strip is removed. No independent third-party review has been carried out.	Author — director, UK principal contractor, SMSTS. Not an independent review.

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.